

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: TUCKER POND	Lake Area (ha):	22.90
Town: SALISBURY	Maximum depth (m):	6.7
County: Merrimack	Mean depth (m):	2.0
River Basin: Merrimack	Volume (m ³):	449500
Latitude: 43°20'18" N	Relative depth:	1.2
Longitude: 71°48'12" W	Shore configuration:	1.36
Elevation (ft): 675	Areal water load (m/yr):	4.16
Shore length (m): 2300	Flushing rate (yr ⁻¹):	2.10
Watershed area (ha): 196.8	P retention coeff.:	0.69
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

19 January 1999

9 September 1998

DOM. PHYTOPLANKTON (% TOTAL)	#1	UROGLENOPSIS 85%	CHRYSOSPHAERELLA 85%
	#2	DINOBRYON 8%	DINOBRYON 7%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			3.27
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 74%	NAUPLIUS LARVA 29%
	#2		POLYARTHRA 22%
	#3		CYCLOPOID COPEPOD 17%
ROTIFERS/LITER		149	80
MICROCRUSTACEA/LITER		11	104
ZOOPLANKTON ABUNDANCE (#/L)		178	184
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			4.0
BOTTOM DISSOLVED OXYGEN (mg/L)		11.1	1.2
BACTERIA (E. coli, #/100 ml)	#1		1
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:

Lake: TUCKER POND
Town: SALISBURY

	19 January 1999		9 September 1998		
DEPTH (m)	2.0	4.0	2.0		5.0
pH (units)	6.0	6.2	6.8		6.6
A.N.C. (Alkalinity)	2.8	5.9	3.5		3.4
NITRATE NITROGEN	0.14	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.40	0.20		0.30
TOTAL PHOSPHORUS	0.005	0.006	0.006		<0.001
CONDUCTIVITY (μ mhos/cm)	26.1	33.3	26.7		27.0
APPARENT COLOR (cpu)	7	8	7		8
MAGNESIUM			0.41		
CALCIUM			1.6		
SODIUM			2.6		
POTASSIUM			0.44		
CHLORIDE	2	3	2		2
SULFATE	3	3	3		3
TN : TP	88	67	33		
CALCITE SATURATION INDEX			3.8		

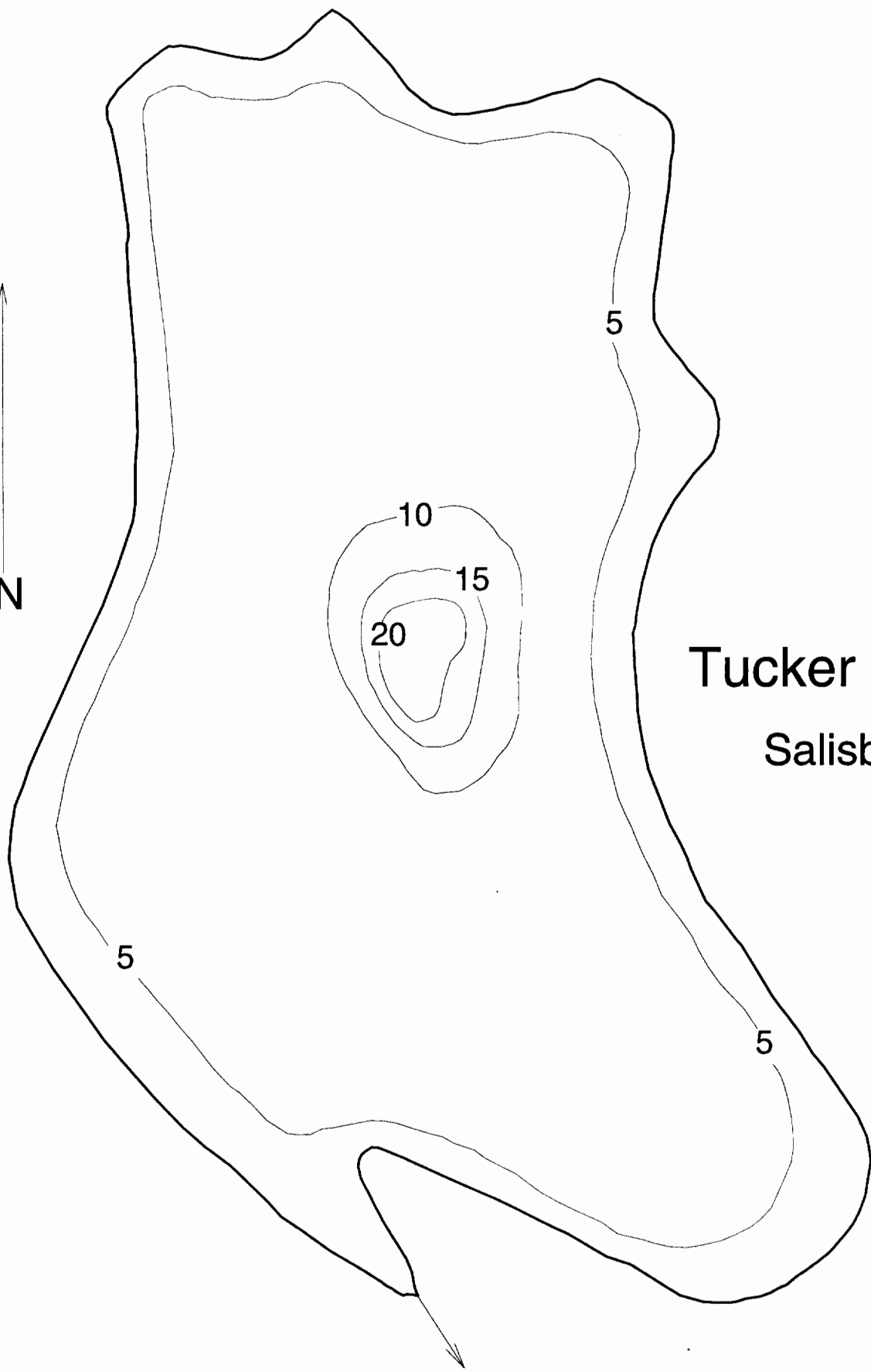
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

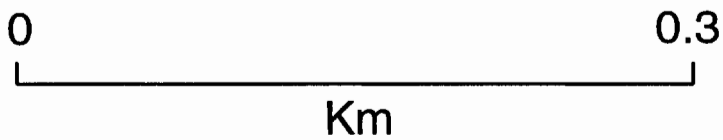
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	5	0	7	Meso.

COMMENTS:

1. Tucker Pond was previously surveyed and classified in 1980. The pond was classified as oligotrophic at that time. The major trophic change between the two years was in plant abundance, going from common to abundant.
2. The pond has participated in VLAP since 1986 and has shown a stable trend in chlorophyll and Secchi depth and an improving trend in phosphorus during that time.
3. The phosphorus concentrations were much less in 1998 compared to 1980. Despite the nuisance of bladderwort, it may be that much of the phosphorus in the pond is tied up in bladderwort biomass. Raking the bladderwort from the pond will help remove phosphorus from the lake.

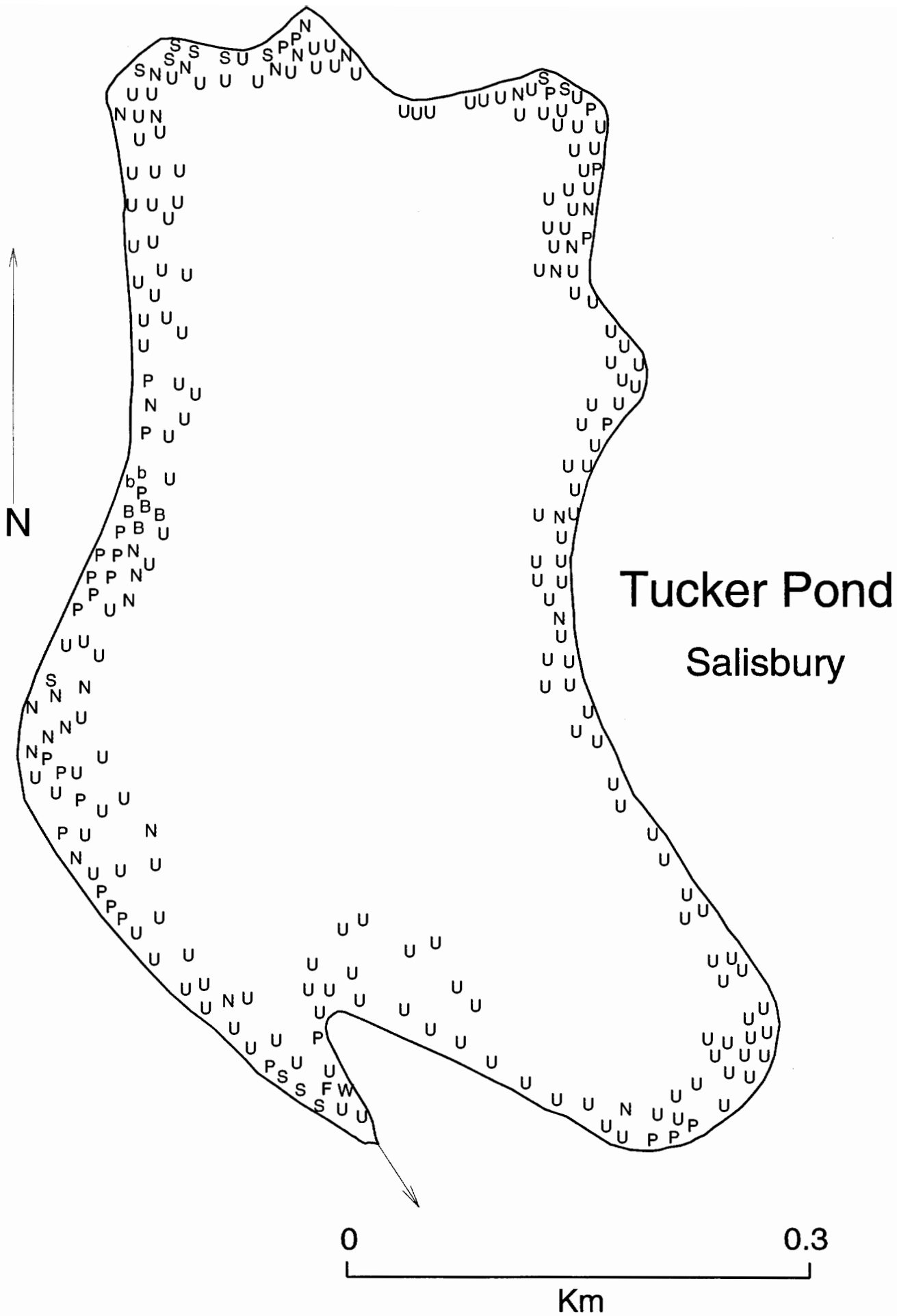


Tucker Pond
Salisbury



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